

## Product Evaluation

RC532 | 0220

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

**Evaluation ID:** RC-532

**Effective Date:** February 1, 2020

**Re-evaluation Date:** February 2024

**Product Name:** Malarkey Modified Bitumen Roofing Systems

**Manufacturer:** Malarkey Roofing Products

3131 N. Columbia Blvd.

Portland, OR 97217

(800) 545-1191

Malarkey Roofing Products

9301 S. Garfield Ave.

South Gate CA 90280

(888) 294-4052

Malarkey Roofing Products

3400 S. Council Road

Oklahoma City, OK 73179

(855) 871-6300

**General Description:**

**350 Paragon CHROMA** Cap SBS polymer modified Granule-Surfaced fiberglass cap sheet.

**410 OmniSeal Base** SBS polymer modified fiberglass base sheet smooth surfaced with a nailable base.

**420 OmniSeal Ply** SBS Polymer modified self-adhering fiberglass base/ply sheet that is smooth surfaced

**430 OmniSeal Cap** SBS polymer modified self-adhering fiberglass cap sheet with a granule surface.

**435 OmniSeal Cap Plus** SBS polymer modified self-adhering polyester FR cap sheet with a granule surface.

**500 Panoply 4** is a built-up roofing asphaltic fiberglass reinforced ply sheet formerly known as 500 Ply 4.

**506 Panoply 6** is a built-up roofing asphaltic fiberglass reinforced ply sheet formerly known as 506 Ply 6.

**515 Panobase** is an asphalt coated fiberglass reinforced base sheet surfaced with mineral parting agent on both sides formerly known as 515 Base. Maybe used as a base sheet or ply sheet.

**502 Panocap** is a built-up roofing cap sheet with a fiberglass mat, coated with asphalt, back is coated with mineral parting agent and top surface is coated with granules formerly known as 502 Cap.

**159 Omni TG Base** is a torch applied fiberglass reinforced, APP modified bitumen membrane with poly-film top and bottom surfaces formerly known as 159 APP

**501 Paragon MOD Base** is an SBS modified fiberglass base sheet with a mineral parting agent on both sides formerly known as 501 Modified Base. Maybe used as base sheet or ply sheet.

**602 Paragon ULTRA Base** is an SBS modified fiberglass base sheet with a mineral parting agent on both sides formerly known as 602 Arctic Shield Modified Base. Maybe used as base or ply sheet.

**603 Paragon SUPER Base** is an SBS modified fiberglass base sheet with mineral parting agent on both sides formerly known as 603 Modified Superbase. Maybe used as a base or ply sheet.

**606 Paragon DUO Base** is a Premium SBS polymer modified high-tensile fiberglass/polyester scrim base sheet with mineral fines on top and bottom.

**1000 ESHAvent** is an SBS modified self-adhering, fiberglass reinforced venting base sheet with a release film on the back and mineral parting on the surface.

**601 Paragon MOD Cap** is an SBS modified fiberglass cap sheet with mineral parting agent on the back and a granule top surface formerly known as 601 Cap.

**625 Paragon ULTRA Cap** is an SBS modified fiberglass cap sheet with mineral parting agent on the back and a granule top surface formerly known as 625 Paragon Cap.

**650 Paragon PLUS Cap** is an SBS modified fiberglass mat and fiberglass scrim cap sheet with mineral parting agent on the back and granules on the top surface formerly known as 650 Panoply Cap.

**524 RCap Plus** is a reflective fiberglass cap sheet LEED qualified, Energy Star listed with mineral parting agent on the back and top granulated surface that is coated with a white acrylic coating.

**624 RCap** is an SBS modified fiberglass reflective cap sheet LEED qualified, Energy Star listed with mineral parting agent on the back and top granulated surface that is coated with a white acrylic coating.

**164 OmniTG RCap** is a torch applied polyester reinforced, APPmodified bitumen membrane with a reflective granule top

**163 Omni TG Smooth** is a torch applied polyester reinforced, APP modified bitumen membrane with a smooth or sanded top surface.

**162 Omni TG Granular** is a torch applied polyester reinforced, APPmodified bitumen membrane with a granule top

**160 Omni TG ULTRA Smooth** is torch applied polyester reinforced, APP modified bitumen membrane with a smooth or sanded top surface.

**161 Omni TG ULTRA Granular** is a torch applied polyester reinforced, APP modified bitumen membrane with a granule top surface and fire-retardant chemistry.

**610 Paragon ULTRA SA Base** is an SBS modified fiberglass base sheet with a mineral parting agent on top and a self-adhering peel & stick underside.

**620 Paragon ULTRA TG Base** is an SBS modified fiberglass base sheet with a mineral parting agent on top and a torch down asphalt on the underside.

**626 Paragon RCap** Premium SBS Polymer modified reflective coated granule surfaced fiberglass cap sheet.

**630 Paragon Ultra TG Cap** is a premium SBS modified Cap sheet with a torch down asphalt on the underside and top granule surface.

**660 Paragon DOU Cap** Premium SBS polymer modified granule-surfaced fiberglass/polyester scrim cap sheet.

**1020 ESHalum** Premium polymer modified cap sheet with an embossed aluminum foil surfaced, polyethylene backing.

#### **Limitations and Installation:**

**General installation Requirements:** All International Residential Code (IRC) and the International Building Code (IBC) requirements must be satisfied and manufacturer's installation instructions followed, unless otherwise specified by this product evaluation.

**For All Applications:** Roof decks, in which this product must be installed upon, must be provided with positive drainage. A minimum roof slope after construction of 1/4" per foot is recommended. Prime decks were required, in accordance with requirements and recommendations of the primer & deck manufacturer (if applicable). For re-roofing and re-cover applications, existing roof surfaces must be primed as necessary with an asphalt primer meeting ASTM D-41 specification and allow to dry prior to installing the Malarkey roofing system.

#### **The following notes apply to the APP systems outlined:**

1. The roof decking must meet or exceed the uplift requirements of the IRC and IBC along with applicable Texas Revisions adopted by the Texas Department of Insurance and must be installed as required for resistance to wind loads.
2. Roof framing members must be spaced a maximum of 24" o.c.
3. Insulation / base sheet fasteners must be of sufficient length for the following deck engagement:
  - Wood: Minimum 3/4" penetration.
4. Unless otherwise noted, insulation adhesive application rates are as follows. Ribbon or bead width is at the time of application; the ribbons/beads must expand as noted in the manufacturer's published instructions.
  - Hot asphalt at 20-40 lbs/square.
  - Dow Insta Stik™ Quik Set Insulation is continuous 3/4 to 1" wide beads, 12" o.c.

- Millennium One Step Foamable Adhesive in continuous 1/2 to 3/4" wide beads, 12" o.c.
  - OlyBond 500 Adhesive Fastener in continuous 3/4 to 1" wide ribbons, 12" o.c. using OMG PaceCart or SpotShot dispensing system. Note: OlyBond 500 Green may be used in any system listing OlyBond 500.
  - 3M CR-20 in continuous 2-1/2-3-1/2" wide ribbons, 12" o.c.
5. Unless otherwise noted, the insulation may be any polyisocyanurate, polystyrene, fiberboard, perlite and/or gypsum-based insulation board that meet the requirements of the IRC and IBC along with applicable Texas Revisions adopted by the TDI.
  6. Bonded polyisocyanurate insulation boards must be maximum 4 x 4'.
  7. Unless otherwise noted, all base sheets specified in this report are metric.
  8. Unless otherwise noted, all insulations are flat stock or taper board of the minimum thickness noted. Tapered polyisocyanurate at the following thickness limitations may be substituted with the following Maximum Design Pressure (MDP) limitations. In no case must these values be used to 'increase' the MDP listings in the tables; rather if MDP listing below meets or exceeds that listed for a particular system in the tables, then the thinner board listed below may be used as a drop-in for the equivalent thicker material listed in the table:

Product	MDP	Thickness
Insta Stik™ Quik Set Insulation Adhesive	-120.0 psf	(min. 0.5-inch thick)
Millennium One Step Foamable Adhesive	-157.5 psf	(min. 0.5-inch thick)
OlyBond 500 Adhesive Fastener	-45.0 psf	(min. 0.5-inch Multi-Max FA-3)
OlyBond 500 Adhesive Fastener	-315.0 psf	(min. 0.5-inch ENRGY 3)
OlyBond 500 Adhesive Fastener	-487.5 psf	(min. 0.5-inch ACFoam-II)
3M CR-20	-117.5 psf	(min. 1.0-inch thick)

9. Unless otherwise noted, refer to the following references for bonded base, ply or cap sheet applications.

Table 1: Malarkey APP Roof Covers			
Reference	Layer	Material	Application
BP-AA (Base and Ply sheets, Asphalt-	Base	159 Omni TG Base	Hot asphalt at 20- 40 lbs/square
	Ply	ASTM D2178, Type IV or VI	
APP-TA (APP, Torch-Applied)	Base or Ply	159 Omni TG Base, 160 Omni TG ULTRA Smooth, 163 Omni TG Smooth	Torch-Applied
	Cap	160 Omni TG ULTRA Smoot, 161 Omni TG ULTRA Granular, 163 Omni TG Smooth, 162 Omni TG Granular	

10. Any of the following coatings may be applied to the top roof membrane. The coatings must be applied in accordance with the manufacturer's installation instructions.
- PG200 Non-Fibered Roof Coating, XtraFlex Bituminous Roof Coating or Mule-Hide 111 Non-Fibrated Roof Coating;
  - PG300 Fibered Roof Coating, XtraFlex Bituminous Roof Coating Fibered or Mule-Hide 102 Fibrated Roof Coating;
  - PG600 Non-Fibered Aluminum Roof Coating or Mule-Hide 416 Standard Non-Fibrated Aluminum Roof Coating;
  - PG650 Fibered Aluminum Roof Coating or Mule-Hide 406 Standard Fibrated Aluminum Roof Coating;
  - PG700 White Reflective Roof Coating;
  - PG800 Non-Fibered Asphalt Emulsion Roof Coating, XtraFlex Emulsion or Mule-Hide 311 Emulsion Non-Fibrated;
  - PG850 Fibered Asphalt Emulsion Roof Coating or Mule-Hide 301 Emulsion Fibrated;
  - Polyplus 60 Premium Non-Fibered Aluminum Roof Coating, XtraFlex Aluminum Roof Coating or Mule-Hide 410 Premium Non-Fibrated Aluminum Roof Coating;
  - Polyplus 65 Premium Fibered Aluminum Roof Coating, XtraFlex Aluminum Roof Coating Fibered or Mule-Hide 401 Premium Fibrated Aluminum Roof Coating; or
  - Polybrite 70 White Elastomeric Roof Coating.

**Installation over an Existing Roof Covering (Roof Recover):**

**Acceptable Applications:** The single-ply roofing system may be installed over an existing built-up roof covering or an existing single-ply roof covering based on the requirements set forth in this product evaluation report.

**Inspection of Roof Covering Recover Installation:** Inspection of the roof covering recover installation must be by a TDI appointed engineer. The TDI appointed engineer must determine if the roof framing can support the combined weight of the existing roof covering and the roof covering recover.

**Roof Covering Replacement versus Roof Covering Recover:** All existing roof coverings must be completely removed, and a new roof covering installed if any of the following conditions occur:

- The existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for the additional roof covering.
- The existing roof has two or more applications of any type of roof covering.

**Positive Drainage:** The roof covering recover application must not be required to meet the minimum roof slope of 1/4" per foot if positive drainage is provided.

**Roof Framing:** The maximum allowable spacing of the roof framing must be as specified in this evaluation report.

**Roof Deck:** The existing roof deck must be as specified in each assembly listed in this evaluation report. The underside of the roof deck must be examined by the TDI appointed engineer for deterioration. A fastener withdrawal resistance test must be conducted in the deteriorated area to determine if the withdrawal resistance of the fastener complies with the minimum fastener requirements for the roof covering recover application. If the tested fastener fails to comply, then the deteriorated roof deck must be replaced.

**Fastener Withdrawal Resistance:** The fastener withdrawal resistance must be conducted in accordance with ANSI/SPRI FX-1-2006 and this evaluation report. Fasteners used for the installation of the roof covering recover to the existing roof deck must be as specified in the Installation Instructions section of this evaluation report. For the withdrawal test, the fasteners must be installed in the existing roof deck as required for the roof covering recover installation. A Texas Department of Insurance appointed engineer must review the data to verify the integrity of the existing roof deck and to compare results of the withdrawal tests with the minimum fastener requirements for the roof covering recover application. The TDI appointed engineer must document all test results, including the locations on the roof surface where the tests are performed. A minimum of ten withdrawal resistance tests are required for a roof area up to 50,000 square feet (a minimum of 50 percent of the tests must be conducted at the perimeter and the corners). Five additional tests are required for each additional 50,000 square feet of roof area or portion thereof (a minimum of 50 percent of the tests must be conducted at the perimeter and the corners). The tests must be located evenly spread across the surface of the roof. At least one withdrawal test must be performed on each level if the roof consists of multiple levels. The withdrawal resistance of each tested fastener must comply with the minimum fastener requirements for the roof covering recover application. If a tested fastener fails to comply, then the Texas Department of Insurance appointed engineer must examine that area for deterioration of the roof deck by removing the existing roof covering in that area. If that area of the roof deck has deteriorated, then the deteriorated roof deck must be replaced.

**Existing Roof Covering Preparation:** The existing roof covering must be prepared to receive the roof covering recover as specified in the installation instructions. The existing roof covering surface must be dry and free of dirt and debris. If the existing roof covering is gravel surfaced, then the loose gravel must be completely removed. The surface of the existing roof covering must be relatively smooth. If the existing roof covering has blisters, buckles, ridges, folds, or other deformations, then they must be removed, and the surface patched to provide a smooth surface. If the existing roof covering has loose fasteners, then the existing membrane must be cut open, the loose fasteners removed, and the surface patched to provide a smooth surface.

**Roof Covering Recover Installation:** Installation of the roof covering recover must be as specified in the Installation Instructions section of this evaluation report.

**Note:** Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.

Table 2b: Wood Decks - Wind Uplift Performance								
Mechanically Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover For App Systems								
Assembly No.	Substrate	Anchor Sheet		Insulation		Roof Cover		
		Type	Attach	Base	Top	Base	Ply	Cap
1	Min. 19/32" plywood	Elastobase, Elastobase Poly, XtraFlex SBS Glass Base, 159 Omni TG Base, CertainTeed Glasbase, Firestone MB Base, JM Perma- Ply 28, Tamko Glass Base or GAFGLAS #75	32 ga., 1-5/8" diameter tin caps with 11 ga. annular ring shank nails	ASTM C1289, type II polyisocyanurate in hot asphalt	Min. 1/4" DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 1/4" FescoBoard or min. 1/2" Structodek High Density Fiberboard Roof Insulation in hot asphalt	BP-AA	(Optional) One or more BP-	APP-TA
2	Min. 19/32" plywood	Elastobase, Elastobase Poly, XtraFlex SBS Glass Base, 159 Omni TG Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass	32 ga., 1-5/8" diameter tin caps with 11 ga. annular ring shank nails	ASTM C1289, type II polyisocyanurate in hot asphalt	Min. 1/4" DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board in hot asphalt	APP-TA	(Optional) One or more APP-TA	APP- TA
<b>Maximum Design Pressure (psf)</b>		<b>Anchor Sheet Attachment</b>						
-52.5		8" o.c. at 4-inch laps and 8" o.c. at three, equally spaced, staggered center rows.						

**TABLE 2C: WOOD DECKS - WIND UPLIFT PERFORMANCE**  
**MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER For APP systems**

Assembly No.	Substrate	Anchor Sheet		Insulation		Roof Cover		
		Type	Attach	Base	Top	Base	Ply	Cap
3	Min. 19/32" plywood	159 Omni TG Base, CertainTeed Glasbase, Firestone MB Base, JM Perma- Ply 28, Tamko Glass Base or GAFGLAS #75	32 ga., 1-5/8" diameter tin caps with 11 ga. annular ring shank nails	ASTM C1289, type II polyisocyanurate in hot asphalt	Min. 1/4" DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 3/4" FescoBoard or min. 1/2" Structodek High Density Wood Fiberboard in hot asphalt	BP-	(Optional) One or more BP-AA	APP-TA
4	Min. 19/32" plywood	159 Omni TG Base, CertainTeed Glasbase, Firestone MB Base, JM Perma- Ply 28, Tamko Glass Base or GAFGLAS #75	32 ga., 1-5/8" diameter tin caps with 11 ga. annular ring shank nails	ASTM C1289, type II polyisocyanurate in hot asphalt	Min. 1/4" DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board in hot asphalt	APP-TA	(Optional) One or more APP-TA	APP- TA
<b>Maximum Design Pressure (psf)</b>		<b>Anchor Sheet Attachment</b>						
-60		8-inch o.c. at 4-inch laps and 8-inch o.c. at three, equally spaced, staggered center rows.						

**TABLE 2E: WOOD DECKS - WIND UPLIFT PERFORMANCE  
MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER For APP systems**

Assembly No.	Substrate	Anchor Sheet		Insulation		Roof Cover		
		Type	Attach	Base	Top	Base	Ply	Cap
5	Min. 19/32" plywood	Elastobase, Elastobase Poly, XtraFlex SBS Glass Base, 159 Omni TG Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	OMG Flat Bottom Plates (square) with #14 Roofgrip, Dekfast Galvalume Steel Hex with Dekfast #14 or TruFast 3" Metal Insulation Plate with TruFast #14 HD Fastener	ASTM C1289, type II polyisocyanurate in hot asphalt	Min. 1/4" DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 3/4" FescoBoard or min. 1/2" Structodek High Density Wood Fiberboard in hot asphalt	BP-AA	(Optional) One or more BP-AA	APP-TA
6	Min. 19/32" plywood	Elastobase, Elastobase Poly, XtraFlex SBS Glass Base, 159 Omni TG Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	OMG Flat Bottom Plates (square) with #14 Roofgrip, Dekfast Galvalume Steel Hex with Dekfast #14 or TruFast 3" Metal Insulation Plate with TruFast #14 HD Fastener	ASTM C1289, type II polyisocyanurate in hot asphalt	Min. 1/4" DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board in hot asphalt	APP-TA	(Optional) One or more APP-TA	APP-TA
<b>Maximum Design Pressure (psf)</b>		<b>Anchor Sheet Attachment</b>						
-52.5		12-inch o.c. at 4-inch laps and 12-inch o.c. at two, equally spaced, staggered center rows.						

Table 3a: Wood Decks - Wind Uplift Performance								
Mechanically Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover For App Systems								
Assembly No.	Substrate	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover		
		Type	Attach	Type	Attach	Base Sheet	Ply Sheet	Cap Sheet
7	Min. 19/32" plywood	Min. 1.5" ENRGY 3, H-Shield or Polytherm	Dekfast Galvalume Steel Hex with Dekfast #14 or #15 HS or TruFast 3" Metal Insulation Plate with TruFast #14 HD or #15 EHD	Min. 3/4" FescoBoard or min. 1/2" Structodek High Density Wood Fiberboard	Hot asphalt	(Optional if using AA Ply) BP-AA	(Optional if using AA Base) One or more BP-AA, APP-TA	APP-TA
<b>Maximum Design Pressure (psf)</b>		<b>Insulation Attachment</b>						
		<b>Density (ft<sup>2</sup> / fastener)</b>		<b>Parts per 4 x 4 ft board</b>			<b>Parts per 4 x 8 ft board</b>	
-52.5		1.33		12			24	

Table 3b: Wood Decks – Wind Uplift Performance								
Mechanically Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover For App Systems								
Assembly No.	Substrate	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover		
		Type	Attach	Type	Attach	Base Sheet	Ply Sheet	Cap
8	Min. 19/32" plywood	Min. 1.5" ENRGY 3, H-Shield or Polytherm	Dekfast Galvalume Steel Hex with Dekfast #14 or #15 HS or TruFast 3" Metal Insulation Plate with TruFast #14 HD or #15 EHD	Min. 3/4" FescoBoard or min. 1/2" Structodek High Density Wood Fiberboard	Hot asphalt	(Optional if using AA Ply) BP-AA	(Optional if using AA Base) One or more BP- AA, or APP-TA	APP-TA
<b>Maximum Design Pressure (psf)</b>		<b>Insulation Attachment</b>						
		<b>Density (ft<sup>2</sup> / fastener)</b>		<b>Parts per 4 x 4 ft board</b>			<b>Parts per 4 x 8 ft board</b>	
-60		1.33		12			24	

Table 4a: Wood Decks - Wind Uplift Performance								
Mechanically Attached Insulation, Bonded Roof, Cover For App Systems								
Assembly No.	Substrate	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover		
		Type	Attach	Type	Attach	Base Sheet	Ply Sheet	Cap Sheet
9	Min. 19/32" plywood	(Optional) One or more layers, any combination	loose laid	Min. 1/2" Structodek High Density Wood Fiberboard or min. 1/4" DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Dekfast Galvalume Steel Hex with Dekfast #14 or #15 HS	(Optional if using AA Ply) BP-AA,	(Optional if using AA Base) One or more BP- AA, APP-	APP-
<b>Maximum Design Pressure (psf)</b>		<b>Insulation Attachment</b>						
		<b>Density (ft2 / fastener)</b>			<b>Parts per 4 x 4 ft board</b>		<b>Parts per 4 x 8 ft board</b>	
-52.5		1.33			12		24	

Table 4b: Wood Decks - Wind Uplift Performance Mechanically Attached Insulation, Bonded Roof Cover For App Systems								
Assembly No.	Substrate	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover		
		Type	Attach	Type	Attach	Base Sheet	Ply Sheet	Cap
10	Min. 19/32" plywood	(Optional) One or more layers, any combination	loose laid	Min. 1/2" Structodek High Density Wood Fiberboard or min. 1/4" DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Dekfast Fasteners #12, #14 and #15 HS	(Optional if using AA Ply) BP-AA,	(Optional if using AA Base) One or more BP- AA, APP-TA	APP-TA
<b>Maximum Design Pressure (psf)</b>		<b>Insulation Attachment</b>						
		<b>Density (ft2 / fastener)</b>			<b>Parts per 4 x 4 ft board</b>		<b>Parts per 4 x 8 ft board</b>	
-67.5		1.33			12		24	

**Table 4c: Wood Decks - Wind Uplift Performance Mechanically Attached Insulation, Bonded Roof Cover For App Systems**

Assembly No.	Substrate	Base Insulation Layer(s)		Top Insulation Layer		Roof Cover		
		Type	Attach	Type	Attach	Base Sheet	Ply Sheet	Cap
11	Min. 19/32" plywood	(Optional) One or more layers, any combination	loose laid	Min. 1/2" Structodek High Density Wood Fiberboard or min. 1/4" DensDeck, DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	Dekfast Galvalume Steel Hex with Dekfast #14 or #15 HS	(Optional if using AA Ply) BP-AA	(Optional if using AA Base) One or more BP- AA, or APP-TA	APP-TA
<b>Maximum Design Pressure (psf)</b>		<b>Insulation Attachment</b>						
		<b>Density (ft2 / fastener)</b>		<b>Parts per 4 x 4 ft board</b>		<b>Parts per 4 x 8 ft board</b>		
-82.5		1.33		12		24		

**Table 5a: Wind Uplift Performance, Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover For App Systems**

Assembly No.	Substrate	Insulation Layer(s)		Base Sheet		Roof Cover		
		Base Layer	Top Layer	Type	Fasteners	Ply	Cap	
12	Min. 19/32" plywood	One or more layers, any combination	(Optional) Min. 1/4" DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Min. 3/4" FescoBoard or min. 1/2" Structodek High Density Wood Fiberboard, loose laid	Elastobase, Elastobase Poly, XtraFlex SBS Glass Base, 159 Omni TG Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	OMG Flat Bottom Plates (square) with #14 Roofgrip, Dekfast Galvalume Steel Hex with Dekfast #14 or TruFast 3" Metal Insulation Plate with TruFast #14 HD Fastener	(Optional) One or more BP-AA, or APP-TA	APP-TA	
<b>Maximum Design Pressure (psf)</b>		<b>Base Sheet Attachment</b>						
-52.5		12-inch o.c. at 4-inch laps and 12-inch o.c. at two, equally spaced, staggered center rows.						

Table 6d: Wood Decks - Wind Uplift Performance, Non-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover For App Systems						
Assembly No.	Substrate	Slip Sheet	Base Sheet		Roof Cover	
			Type	Fasteners	Ply	Cap
13	Min. 19/32" plywood	(Optional) ASTM D 4601, Type II base sheet loose laid	Elastobase, Elastobase Poly, XtraFlex SBS Glass Base, 159 Omni TG Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS	32 ga., 1-5/8" diameter tin caps with 11 ga. annular ring shank nails	(Optional) One or more BP-AA, or APP-TA	APP- TA
<b>Maximum Design Pressure (psf)</b>		<b>Base Sheet Attachment</b>				
-60		8-inch o.c. at 4-inch laps and 8-inch o.c. at three, equally spaced, staggered center rows.				

Table 6f: Wood Decks - Wind Uplift Performance, Non-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover For App Systems					
Assembly No.	Substrate	Base Sheet		Roof Cover	
		Type	Fasteners	Ply	Cap
14	Min. 19/32" plywood	Elastobase, Elastobase Poly, XtraFlex SBS Glass Base, 159 Omni TG Base, CertainTeed Glasbase, Firestone MB Base, JM Perma-Ply 28, Tamko Glass Base or GAFGLAS #75	OMG Flat Bottom Plates (square) with #14 Roofgrip, Dekfast Galvalume Steel Hex with Dekfast #14 or TruFast 3" Metal Insulation Plate with TruFast #14 HD Fastener	(Optional) One or more BP- AA or APP- TA	APP-TA
<b>Maximum Design Pressure (psf)</b>		<b>Base Sheet Attachment</b>			
-52.5		12-inch o.c. at 4-inch laps and 12-inch o.c. at two, equally spaced, staggered center rows.			

Table 6l: Wood Deck - Wind Uplift Performance, On-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover For App Systems					
Assembly No.	Substrate	Base Sheet		Roof Cover	
		Type	Fasteners	Ply	Cap
15	Min. 15/32" plywood	159 Omni TG Base	Original Simplex Cap Nails (1" head diameter, 11-gauge x 1.25" long annular grooved shank)	(Optional) APP-TA	APP-TA
<b>Maximum Design Pressure (psf)</b>		<b>Base Sheet Attachment</b>			
		<b>At Lap</b>		<b>Staggered Center Rows(s)</b>	
		<b>Max. Spacing (inch)</b>	<b>Min. Lap Width (inch)</b>	<b>Max Spacing (inch o.c.)</b>	<b>Min. # of Rows</b>
-52.5		6	3	6	4

Table 6m: Wood Decks – Wind Uplift Performance, Non-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover For App Systems					
Assembly No.	Substrate	Base Sheet		Roof Cover	
		Type	Fasteners	Ply	Cap
16	Min. 15/32" plywood	159 Omni TG Base	Min. 1-5/8"OMG #12 Standard Roof grip or OMG #14 Heavy Duty with OMG 3" Round Metal Plates or OMG Flat Bottom Metal Plates	(Optional) APP-TA	APP-TA
<b>Maximum Design Pressure (psf)</b>		<b>Base Sheet Attachment</b>			
		<b>At Lap</b>		<b>Staggered Center Rows(s)</b>	
		<b>Max Spacing (inch o.c.)</b>	<b>Min. Lap Width (inch)</b>	<b>Max Spacing (inch o.c.)</b>	<b>Min. # of Rows</b>
-90		6	4	6	3

Table Bur 1: Wood Decks - Wind Uplift Performance, Non-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover					
Assembly No.	Substrate	Base Sheet		Roof Cover	
		Type	Fasteners	Ply	Cap
17	7/16" OSB Sheathing, 15/32" Plywood Sheathing, (see base sheet attachment)	501 or 515	Grip Rite 1-1/2" EG Square Metal Cap	2 of any ply sheets, 500, 506, 501, 515, 602, 603 in hot asphalt applied 20 to 30 lbs per square.	Any one of the following cap sheets: 502, 350, 601, 625, 650, 524, 624 in 20 to 30 lbs of hot asphalt
<b>Maximum Design Pressure (psf)</b>		<b>Base Sheet Attachment</b>			
-37.5		6-inch o.c. at 2-inch laps and 6-inch o.c. at two, equally spaced, staggered center rows over 7/16" OSB			
-45		6-inch o.c. at 2-inch laps and 6-inch o.c. at four, equally spaced, staggered center rows over 7/16" OSB.			
-37.5		8-inch o.c. at 2-inch laps and 8-inch o.c. at two equally spaced, staggered center rows over 15/32" Plywood			
-45		8-inch o.c. at 2-inch laps and 8-inch o.c. at three equally spaced staggered center rows over 15/32" Plywood			

Table Bur 2: Wood Decks - Wind Uplift Performance, Non-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover					
Assembly No.	Substrate	Base Sheet		Roof Cover	
		Type	Fasteners	Ply	Cap
18	7/16" OSB Sheathing, 15/32" Plywood Sheathing, (see base sheet attachment)	501 or 515	National Nail ROLPAC fasteners.	2 of any ply sheets, 500, 506, 501, 515, 602, 603 in hot asphalt applied 20 to 30 lbs per square.	Any one of the following cap sheets: 502, 350, 601, 625, 650, 524, 624 in 20 to 30 lbs of hot asphalt.
<b>Maximum Design Pressure (psf)</b>		<b>Base Sheet Attachment</b>			
-45		6-inch o.c. at 2-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows. over 7/16" OSB			
-45		6-inch o.c. at 2-inch laps and 6-inch o.c. at three, equally spaced, staggered center rows over 15/32" Plywood.			

Roof Cover System #1 Mod Bit with Karnak adhesive W/ Construction #2						
Assembly No.	Deck	Insulation Securement		Insulation	Cover board Securement	Cover board
19	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip,OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners minimum 12 fasteners per 4x8 ft (1.2x2.4 m) board (2.67 ft <sup>2</sup> (0.25 m <sup>2</sup> ) max contributory area)		Minimum 2.0 in (51 mm) thick flat or tapered ACfoam-II, HShield or Multi-Max FA-3 insulation	Adhered with Olybond 500, Insta-Stik Roofing Adhesive or Millennium One Step Foamable Adhesive applied in 0.75 in (19 mm) wide ribbons spaced 12 in (305 mm) o.c.	Minimum 0.25 in (6 mm) thick Dens Deck Prime
	<b>Ply Side Laps</b>	<b>Cap Ply Side Laps</b>	<b>Ply Securement</b>	<b>Plies</b>	<b>Cap Ply Securement</b>	<b>Cap Ply</b>
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Min. 4 in. (102 mm) wide laps are adhered with cold-applied adhesive	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m <sup>2</sup> ).	2 – 3 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m <sup>2</sup> ).	502 Panocap, 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap, 626 Paragon RCap, 630 Paragon ULTRA TG Cap
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108 Class A @ 0.5 in 12				
-37.5	Wind Rating: Class 1-75					

Roof Cover System #2 Mod Bit with Karnak adhesive W/ Construction #1					
Assembly No.	Deck	Insulation Securement	Insulation	Cover board Securement	Cover board
20	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Loose laid	Minimum 2.0 in (51 mm) thick flat or tapered ACFoam-II, HShield or Multi-Max FA-3 insulation	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip,OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners minimum 12 fasteners per 4x8 ft (1.2x2.4 m) board (2.67 ft <sup>2</sup> (0.25 m <sup>2</sup> ) max contributory area)	Minimum 0.25 in (6 mm) thick Dens Deck Prime
	<b>Ply Side Laps</b>	<b>Ply Securement</b>		<b>Plies</b>	<b>Coating</b>
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m <sup>2</sup> ).		3 – 4 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Karnak No. 66 Modified Bitumen Adhesive applied at a rate of 2.5-3.0 gal/sq (1.0-1.2 L/m <sup>2</sup> ) and gravel at a rate of 300-400 lbs/sq (14.6-19.5 kg/m <sup>2</sup> )
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108 Class A @ 0.5 in 12			
-37.5	Wind Rating: Class 1-75				

Roof Cover System #2 Mod Bit with Karnak adhesive W/ Construction #1a				
Assembly No.	Deck	Insulation Securement		Insulation
21	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip,OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners minimum 12 fasteners per 4x8 ft (1.2x2.4 m) board (2.67 ft2 (0.25 m2) max contributory area)		Minimum 0.25" (6 mm) thick Dens Deck Prime
	Ply Side Laps	Ply Securement	Plies:	Coating
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2).	3 – 4 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Karnak No. 66 Modified Bitumen Adhesive applied at a rate of 2.5-3.0 gal/sq (1.0-1.2 L/m2) and gravel at a rate of 300-400 lbs/sq (14.6-19.5 kg/m2)
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108 Class A @ 0.5 in 12		
-37.5	Wind Rating: Class 1-75			

Roof Cover System #2 Mod Bit with Karnak adhesive W/ Construction #2					
Assembly No.	Deck	Insulation Securement	Insulation	Cover board Securement	Cover board
22	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip,OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners minimum 12 fasteners per 4x8 ft (1.2x2.4 m) board (2.67 ft <sup>2</sup> (0.25 m <sup>2</sup> ) max contributory area)	Minimum 2.0 in (51 mm) thick flat or tapered ACFoam-II, HShield or Multi-Max FA-3 insulation	Adhered with Olybond 500, Insta-Stik Roofing Adhesive or Millennium One Step Foamable Adhesive applied in 0.75 in (19 mm) wide ribbons spaced 12 in (305 mm) o.c.	Minimum 0.25 in (6 mm) thick Dens Deck Prime
	Ply Side Laps	Ply Securement	Plies:	Coating	
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m <sup>2</sup> ).	3 – 4 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Karnak No. 66 Modified Bitumen Adhesive applied at a rate of 2.5-3.0 gal/sq (1.0-1.2 L/m <sup>2</sup> ) and gravel at a rate of 300-400 lbs/sq (14.6-19.5 kg/m <sup>2</sup> )	
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108 Class A @ 0.5 in 12			
-37.5	Wind Rating: Class 1-75				

Roof Cover System #2 Mod Bit with Karnak adhesive W/ Construction #3						
Assembly No.	Deck	Insulation Securement	Insulation	Cover board Securement		Cover board
23	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Loose laid	Optional Minimum 2.0 in (51 mm) thick flat or tapered ACFoam-II, HShield or Multi-Max FA-3 insulation	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip,OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners at a maximum rate of 1 fastener per 2 ft2 (0.19 m2) minimum (4x4 ft (1.2x1.2 m) board		Minimum 0.75 in (19 mm) thick Fesco Board (homogeneous), Fesco Board (Laminated), GAFTEMP Permalite, GAFTEMP Permalite (laminated)
	<b>Ply Side Laps</b>	<b>Ply Securement</b>		<b>Plies:</b>	<b>Coating</b>	
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2).		3 – 4 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Karnak No. 66 Modified Bitumen Adhesive applied at a rate of 2.5-3.0 gal/sq (1.0-1.2 L/m2) and gravel at a rate of 300-400 lbs/sq (14.6-19.5 kg/m2)	
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108 Class A @ 0.5 in 12				
-30.0	Wind Rating: Class 1-60					

Roof Cover System #2 Mod Bit with Karnak adhesive W/ Construction #3a					
Assembly No.	Deck	Insulation Securement	Insulation	Cover board Securement	Cover board
24	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Loose laid	Optional Minimum 2.0 in (51 mm) thick flat or tapered ACFoam-II, HShield or Multi-Max FA-3 insulation	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip,OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners at a maximum rate of 1 fastener per 2 ft2 (0.19 m2) minimum (4x4 ft (1.2x1.2 m) board	Minimum 0.75 in (19 mm) thick Fesco Board (homogeneous), Fesco Board (Laminated), GAFTEMP Permalite, GAFTEMP Permalite (laminated)
	<b>Ply Side Laps</b>	<b>Ply Securement</b>	<b>Plies:</b>	<b>Coating</b>	
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2).	3 – 4 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Karnak No. 66 Modified Bitumen Adhesive applied at a rate of 2.5-3.0 gal/sq (1.0-1.2 L/m2) and gravel at a rate of 300-400 lbs/sq (14.6-19.5 kg/m2)	
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108 Class A @ 0.5 in 12			
-30	Wind Rating: Class 1-60				

Roof Cover System #1 Mod Bit with Karnak adhesive W/ Construction #3						
Assembly No.	Deck	Insulation Securement	Insulation	Cover board Securement		Cover board
25	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Loose laid	Optional Minimum 2.0 in (51 mm) thick flat or tapered ACFoam-II, HShield or Multi-Max FA-3 insulation	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip,OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners at a maximum rate of 1 fastener per 2 ft2 (0.19 m2) minimum(4x4 ft (1.2x1.2 m) board		Minimum 0.75 in (19 mm) thick Fesco Board (homogeneous), Fesco Board (Laminated), GAFTEMP Permalite, GAFTEMP Permalite (laminated)
	Ply Side Laps	Cap Ply Side Laps	Ply Securement	Plies:	Cap Ply Securement	Cap Ply
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Min. 4 in. (102 mm) wide laps are adhered with cold-applied adhesive	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81l/m2).	2 – 3 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81l/m2).	502 Panocap, 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap, 626 Paragon RCap, 630 Paragon ULTRA TG Cap
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108 Class A @ 0.5 in 12				
-30.0	Wind Rating: Class 1-60					

Roof Cover System #1 Mod Bit with Karnak adhesive W/ Construction #3a						
Assembly No.	Deck	Insulation Securement	Insulation	Cover board Securement		Cover board
26	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Loose laid	Optional Minimum 2.0 in (51 mm) thick flat or tapered ACFoam-II, HShield or Multi-Max FA-3 insulation	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners at a maximum rate of 1 fastener per 2 ft2 (0.19 m2) minimum (4x4 ft (1.2x1.2 m) board		Minimum 0.75 in (19 mm) thick Fesco Board (homogeneous), Fesco Board (Laminated), GAFTEMP Permalite, GAFTEMP Permalite (laminated)
	<b>Ply Side Laps</b>	<b>Cap Ply Side Laps</b>	<b>Ply Securement</b>	<b>Plies:</b>	<b>Cap Ply Securement</b>	<b>Cap Ply</b>
	Min. 2" (51 mm) wide laps are adhered with cold-applied adhesive	Min. 4" (102 mm) wide laps are adhered with cold-applied adhesive	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81l/m2).	2 – 3 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Adhered with Karnak No. 66 Modified Bitumen Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81l/m2).	502 Panocap, 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap, 626 Paragon RCap, 630 Paragon ULTRA TG Cap
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108 Class A @ 0.5 in 12				
-30.0	Wind Rating: Class 1-60					

Roof Cover System #3 Mod Bit with Karnak adhesive W/ Construction #1						
Assembly No.	Deck	Insulation Securement	Insulation	Cover board Securement		Cover board
27	Structural concrete deck (minimum compressive strength of 2500 psi and a minimum thickness of 2 inches)	Loose laid	Minimum 2.0 in (51 mm) thick flat or tapered ACFoam-II, HShield or Multi-Max FA-3 insulation	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip,OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners minimum 12 fasteners per 4x8 ft (1.2x2.4 m) board (2.67 ft2 (0.25 m2) max contributory area)		Minimum 0.25 in (6 mm) thick Dens Deck Prime
	<b>Ply Side Laps</b>	<b>Cap Ply Side Laps</b>	<b>Ply Securement</b>	<b>Plies:</b>	<b>Cap Ply Securement</b>	<b>Cap Ply</b>
	Min. 2" (51 mm) wide laps are adhered with cold-applied adhesive	Min. 4" (102 mm) wide laps are adhered with cold-applied adhesive	Adhered with 737 Solvent Free SBS Mod-Bit Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2).	1-2 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Adhered with 737 Solvent Free SBS Mod-Bit Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2).	502 Panocap, 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap, 626 Paragon RCap, 630 Paragon ULTRA TG Cap
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108: Class A @ 1 in 12 – for 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap. Class A @ 1.5 in 12 – for 626 Paragon RCap, 660 Paragon DUO Cap. Class A @ 2 in 12 – for 630 Paragon ULTRA TG Cap				
-37.5	Wind Rating: Class 1-75					

Roof Cover System #3 Mod Bit with Karnak adhesive W/ Construction #1a						
Assembly No.	Deck	Insulation Securement			Insulation	
28	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip,OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners minimum 12 fasteners per 4x8 ft (1.2x2.4 m) board (2.67 ft2 (0.25 m2) max contributory area)			Minimum 0.25 in (6 mm) thick Dens Deck Prime	
	Ply Side Laps	Cap Ply Side Laps	Ply Securement	Plies:	Cap Ply Securement	Cap Ply
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Min. 4 in. (102 mm) wide laps are adhered with cold-applied adhesive	Adhered with 737 Solvent Free SBS Mod-Bit Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2)	1-2 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Adhered with 737 Solvent Free SBS Mod-Bit Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2)	502 Panocap, 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap, 626 Paragon RCap, 630 Paragon ULTRA TG Cap
Maximum Design Pressure (psf)	Hail-SH	ASTM E108: Class A @ 1 in 12 – for 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap. Class A @ 1.5 in 12 – for 626 Paragon RCap, 660 Paragon DUO Cap. Class A @ 2 in 12 – for 630 Paragon ULTRA TG Cap				
-37.5	Wind Rating: Class 1-75					

Roof Cover System #3 Mod Bit with Karnak adhesive W/ Construction #2						
Assembly No.	Deck	Insulation Securement		Insulation	Cover board Securement	Cover board
29	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip,OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners minimum 12 fasteners per 4x8 ft (1.2x2.4 m) board (2.67 ft2 (0.25 m2) max contributory area)		Minimum 2.0 in (51 mm) thick flat or tapered ACFoam-II, HShield or Multi-Max FA-3 insulation	Adhered with Olybond 500, Insta-Stik Roofing Adhesive or Millennium One Step Foamable Adhesive applied in 0.75 in (19 mm) wide ribbons spaced 12 in (305 mm) o.c.	Minimum 0.25 in (6 mm) thick Dens Deck Prime
	<b>Ply Side Laps</b>	<b>Cap Ply Side Laps</b>	<b>Ply Securement</b>	<b>Plies:</b>	<b>Cap Ply Securement</b>	<b>Cap Ply</b>
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Min. 4 in. (102 mm) wide laps are adhered with cold-applied adhesive	Adhered with 737 Solvent Free SBS Mod-Bit Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2).	1-2 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Adhered with 737 Solvent Free SBS Mod-Bit Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2).	502 Panocap, 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap, 626 Paragon RCap, 630 Paragon ULTRA TG Cap
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108: Class A @ 1 in 12 – for 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap. Class A @ 1.5 in 12 – for 626 Paragon RCap, 660 Paragon DUO Cap. Class A @ 2 in 12 – for 630 Paragon ULTRA TG Cap				
-37.5	Wind Rating: Class 1-75					

Roof Cover System #3 Mod Bit with Karnak adhesive W/ Construction #3						
Assembly No.	Deck	Insulation Securement	Insulation	Cover board Securement		Cover board
30	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Loose laid	Optional Minimum 2.0 in (51 mm) thick flat or tapered ACFoam-II, HShield or Multi-Max FA-3 insulation	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners at a maximum rate of 1 fastener per 2 ft <sup>2</sup> (0.19 m <sup>2</sup> ) minimum (4x4 ft (1.2x1.2 m) board		Minimum 0.75 in (19 mm) thick Fesco Board (homogeneous), Fesco Board (Laminated), GAFTEMP Permalite, GAFTEMP Permalite (laminated)
	<b>Ply Side Laps</b>	<b>Cap Ply Side Laps</b>	<b>Ply Securement</b>	<b>Plies:</b>	<b>Cap Ply Securement</b>	<b>Cap Ply</b>
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Min. 4 in. (102 mm) wide laps are adhered with cold-applied adhesive	Adhered with 737 Solvent Free SBS Mod-Bit Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m <sup>2</sup> ).	1-2 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Adhered with 737 Solvent Free SBS Mod-Bit Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m <sup>2</sup> ).	502 Panocap, 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap, 626 Paragon RCap, 630 Paragon ULTRA TG Cap
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108: Class A @ 1 in 12 – for 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap. Class A @ 1.5 in 12 – for 626 Paragon RCap, 660 Paragon DUO Cap. Class A @ 2 in 12 – for 630 Paragon ULTRA TG Cap				
-30.0	Wind Rating: Class 1-60					

Roof Cover System #3 Mod Bit with Karnak adhesive W/ Construction #3a						
Assembly No.	Deck	Insulation Securement	Insulation	Cover board Securement		Cover board
31	Steel deck, 22 to 16 ga. or structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	Loose laid	Optional Minimum 2.0 in (51 mm) thick flat or tapered ACFoam-II, HShield or Multi-Max FA-3 insulation	Mechanically fastened with 3 in. Round Metal Plate and OMG 3" Galvalume Steel Plate and #12 Roofgrip, # 12 Standard Roofgrip, #14 Roofgrip, #15 Roofgrip, OMG #12 Standard, OMG #14 Heavy Duty or Trufast 3" Metal Insulation Plate and Trufast #12 DP, Trufast #14 HD or Trufast #15 EHD fasteners at a maximum rate of 1 fastener per 2 ft2 (0.19 m2) minimum (4x4 ft (1.2x1.2 m) board		Minimum 0.75 in (19 mm) thick Fesco Board (homogeneous), Fesco Board (Laminated), GAFTEMP Permalite, GAFTEMP Permalite (laminated)
	<b>Ply Side Laps</b>	<b>Cap Ply Side Laps</b>	<b>Ply Securement</b>	<b>Plies:</b>	<b>Cap Ply Securement</b>	<b>Cap Ply</b>
	Min. 2 in. (51 mm) wide laps are adhered with cold-applied adhesive	Min. 4 in. (102 mm) wide laps are adhered with cold-applied adhesive	Adhered with 737 Solvent Free SBS Mod-Bit Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2).	1-2 plies of 501 Paragon MOD Base, 503 Modified Base, 602 Paragon ULTRA Base, 603 Paragon SUPER Base, 605 Paragon PLUS Base, 606 Paragon DUO Base	Adhered with 737 Solvent Free SBS Mod-Bit Adhesive applied in full coverage at a rate of 1.5-2.0 gal/sq (0.61-0.81 l/m2).	502 Panocap, 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap, 626 Paragon RCap, 630 Paragon ULTRA TG Cap
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108: Class A @ 1 in 12 – for 601 Paragon MOD Cap, 625 Paragon ULTRA Cap, 650 Paragon PLUS Cap, 660 Paragon DUO Cap. Class A @ 1.5 in 12 – for 626 Paragon RCap, 660 Paragon DUO Cap. Class A @ 2 in 12 – for 630 Paragon ULTRA TG Cap				
-30.0	Wind Rating: Class 1-60					

Wind Uplift Performance, Non-Insulated, Fully Adhered Base Sheet, Bonded Roof Cover					
Assembly No.	Deck	Substrate Primer	Base Ply	Optional Ply	Cap Ply
32	Structural concrete deck (must have a minimum compressive strength of 2500 psi and a minimum thickness of 2 inches)	Concrete primer, asphaltic	610 Paragon ULTRA SA Base	620 Paragon ULTRA TG Base	630 Paragon ULTRA TG Cap
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108: Meets Class A @ 2 in 12			
-480	Wind Rating: Class 1-960				

Wind Uplift Performance, Insulated, Fully Adhered Base Sheet, Bonded Roof Cover						
Assembly No.	Deck	Insulation	Cover board	Base Ply	Ply	Cap Ply
33	22 ga., Type B, Grade 40 steel in new construction or re-roof (tear-off)	Minimum 2.0 in (51 mm) thick H-Shield, ACFoam-II, Multi-Max FA-3, Tapered Therमारoof-3, Tapered Ultra-Max Plus, Ultra-Max, Ultra-Max Plus, loose laid	Minimum 0.25 in (6 mm) thick Securock Gypsum-Fiber Roof Board (4x8 ft (1.2x2.4m) boards), mechanically fastened with OMG 3" Galvalume Steel Plate and OMG #12 Standard at a maximum rate of 1 fastener per 4 sq ft (0.37 m <sup>2</sup> )	620 Paragon ULTRA TG Base, torch applied with minimum 3 in (76 mm) wide torched applied laps	Optional 620 Paragon ULTRA TG Base, torch applied with minimum 3 in (76 mm) wide torched applied laps	630 Paragon ULTRA TG Cap, torch applied with minimum 3 in (76 mm) wide torched applied laps
<b>Maximum Design Pressure (psf)</b>	Hail-SH	ASTM E108: Meets Class A @ 2 in 12				
-45	Wind Rating: Class 1-90					

<b>Wind Uplift Performance, Insulated, Fully Adhered Base Sheet, Bonded Roof Cover</b>						
Assembly No.	Deck	Insulation	Cover board	Base Ply	Ply	Cap Ply
34	22 ga., Type B, Grade 40 steel in new construction or re-roof (tear-off)	Minimum 2.0 in (51 mm) thick H-Shield, ACFoam-II, Multi-Max FA-3, Tapered Therमारoof-3, Tapered Ultra-Max Plus, Ultra-Max, Ultra-Max Plus, loose laid	Minimum 0.25 in (6 mm) thick Dens Deck Prime (4x8 ft (1.2x2.4m) boards), mechanically fastened with OMG 3" Galvalume Steel Plate and OMG #12 Standard at a maximum rate of 1 fastener per 2.67 sq ft (0.25 m <sup>2</sup> )	620 Paragon ULTRA TG Base, torch applied with minimum 3 in (76 mm) wide torched applied laps	Optional 620 Paragon ULTRA TG Base, torch applied with minimum 3 in (76 mm) wide torched applied laps	630 Paragon ULTRA TG Cap, torch applied with minimum 3 in (76 mm) wide torched applied laps
<b>Maximum Design Pressure (PSF)</b>	Hail-SH	ASTM E108: Meets Class A @ 2 in 12				
-45	Wind Rating: Class 1-90					

Wind Uplift Performance, Insulated, Fully Adhered Base Sheet, Bonded Roof Cover						
Assembly No.	Substrate	Insulation (optional)	Fastener	Cover Board	Base Ply	Cap Ply
35	Structural concrete (minimum compressive strength of 2500 psi) min. thickness 2 in	One or more layer(s), minimum 1-inch Atlas AC Foam II, Johns Manville ENERGY 3, Hunter panels H-Shield, Firestone ISO 95+GL or RMax Multi-Max FA3	Continuous ribbons of 3M Polyurethane Foam Insulation Adhesive CR-20, Royal Millennium One Step Foamable Adhesive, Royal Millennium PG-1 Pump Grade Adhesive, Dow Insta-Stik Roofing Adhesive or OMG OlyBond 500 spaced 12-inch o.c.	Min. 0.25-inch DensDeck Prime Roof Board applied in continuous ribbons of 3M Polyurethane Foam Insulation Adhesive CR-20, Royal Millennium One Step Foamable Adhesive, Royal Millennium PG-1 Pump Grade Adhesive Dow Insta-Stik Roofing Adhesive or OMG OlyBond 500 spaced 12-inch on center.	610 Paragon ULTRA SA Base or 420 OmniSeal™ Ply, self-adhered	430 OmniSeal Cap, 435 OmniSeal Cap Plus 440 OmniSeal Poly CAP or 635 SA CAP Sheet, Self-adhered or 161 Omni TG Ultra Granular, 164 Omni, TG Rcap or 630 Paragon ULTRA TG Cap, Torch-applied
<b>Maximum Design Pressure (psf)</b>						
-190						

Wind Uplift Performance, Insulated, Fully Adhered Base Sheet, Bonded Roof Cover						
Assembly No.	Substrate	Insulation (optional)	Fastener	Cover Board	Base Ply	Cap Ply
36	22 ga. Type B, Grade 40 steel in new construction	Loose laid base insulation of any type or thickness may be installed between the deck or existing roof cover and the top layer insulation	Dekfast #12 DP, Dekfast#14 or Dekfast #15 HS with Dekfast Galvalume® Hex Plates or Dekfast 3" Round Steel Plates, OMG #12 Roof grip, OMG #14 Roofgrip or OMG XHD with OMG 3 in. Galvalume® Steel Plates (non-ribbed) or OMG Flat Bottom Accu Trac Plates or Trufast #12 DP, Trufast#14 HD or Trufast #15 EHD with Trufast 3" Metal Insulation Plate. For re-roof or recover construction, field withdrawal resistance testing shall yield minimum 240 lbf. Fastener shall engage the top flange of the steel deck and be of sufficient length for minimum ¾-inch penetration.	Min. 0.5-inch DensDeck Prime Roof Board, mechanically attached at 1 per 1.78ft <sup>2</sup> (9 parts per 4x4 ft board or 18 parts per 4x8 ft board), as depicted below.	610 Paragon ULTRA SA Base or 420 OmniSeal	430 OmniSeal Cap, 435 OmniSeal Cap Plus 440 OmniSeal Poly Cap or 635 SA Cap Sheet, Self-adhered or 161 Omni TG Ultra Granular, 164 Omni, TG Rcap or 630 Paragon ULTRA TG Cap, Torch-applied.
<b>Maximum Design Pressure (psf)</b>						
-67.5						

Wind uplift performance, Insulated, Fully Adhered Base Sheet, Bonded Roof Cover						
Assembly No.	Substrate	Insulation (optional)	Base sheet	Base sheet fastener	Base Ply	Cap Ply
37	22 ga. Type B, Grade 40 steel in new construction	Loose laid base insulation of any type or thickness may be installed between the deck or existing roof cover and the top layer insulation	501 modified Base, 501 Paragon® MOD BASE or 410 OmniSeal™ Base mechanically attached 6-inch o.c. at the 4-inch wide side laps and 12-inch o.c. at two (2) equally spaced, staggered center rows.	Dekfast #12 DP, Dekfast#14 or Dekfast #15 HS with Dekfast Galvalume® Hex Plates or Dekfast 3" Round Steel Plates, OMG #12 Roof grip, OMG #14 Roofgrip or OMG XHD with OMG 3 in. Galvalume® Steel Plates (non-ribbed) or OMG Flat Bottom Accu Trac Plates or Trufast #12 DP, Trufast#14 HD or Trufast #15 EHD with Trufast 3" Metal Insulation Plate. For re-roof or recover construction, field withdrawal resistance testing shall yield minimum 88 lbf. Fastener shall engage the top flange of the steel deck and be of sufficient length for minimum ¾-inch penetration.	610 Paragon ULTRASA Base or 420 OmniSeal™ Ply, self-adhered	430 OmniSeal Cap, 435 OmniSeal Cap Plus 440 OmniSeal Poly CaP or 635 SA CAP Sheet, Self-adhered or 161 Omni TG Ultra Granular, 164 Omni, TG Rcap or 630 Paragon ULTRA TG Cap, Torch-applied
<b>Maximum Design Pressure (psf)</b>						
-60						